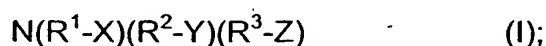


CLAIMS

1. A reagent for use in immunoassays, comprising:
a plurality of particles;
each of said particles comprising a surface having been
activated by a carbodiimide;
a binding agent linked to the surface through a covalent
bond; and
a tertiary amine compound of formula (I)



wherein R^1 , R^2 , and R^3 are independently selected from the group consisting of alkyl and alkyl ether; and

X, Y, and Z are independently selected from the group consisting of $-OH$, $-O-R^4$, $-S-R^4$, $-C(=O)-OH$, $-C(=O)-OR^4$, or $-C(=O)-NHR^4$, wherein R^4 is alkyl.

2. The reagent of claim 1, wherein R^1 , R^2 , R^3 and R^4 are independently alkyl groups comprising from 1 to 5 carbon atoms.
3. The reagent of claim 1, wherein X, Y, and Z are independently selected from the group consisting of $-OH$ and $-O-R^4$.
4. The reagent of claim 1, wherein
 R^1 , R^2 , and R^3 are independently alkyl groups comprising from 1 to 5 carbon atoms; and
X, Y, and Z are $-OH$.
5. The reagent of claim 1, wherein the tertiary amine compound is triethanolamine.
6. The reagent of claim 1, wherein the reagent forms an assay mixture when mixed with a sample; and

wherein the tertiary amine compound is present in the assay mixture in a concentration of 50 mM or less.

7. The reagent of claim 6, wherein the tertiary amine compound is present in the assay mixture in a concentration of 25 mM or less.

5 8. The reagent of claim 6, wherein the tertiary amine compound is present in the assay mixture in a concentration of 12.5 mM or less.

9. The reagent of claim 6, wherein the tertiary amine compound is present in the assay mixture in a concentration of 5 mM or less.

10 10. The reagent of claim 1, wherein the particles further comprise the reaction product of a succinimide ester and a primary amine compound on the surface.

15 11. The reagent of claim 10, wherein the primary amine compound is selected from the group consisting of glycine ethyl ester; 2-(aminoethoxy)ethanol; 2,2'-(ethylenedioxy)bisethylamine; and 4,7,10-trioxa-1,3-tridecanediamine.

12. The reagent of claim 1, wherein the plurality of particles and the tertiary amine compound are present in a single liquid mixture.

13. A reagent for use in immunoassays, comprising:
a plurality of particles;

20 each of said particles comprising a surface having been activated by a carbodiimide;

a binding agent linked to the surface through a covalent bond; and

a tertiary amine compound of formula (II)

25
$$N(R^1-OH)(R^2-OH)(R^3-OH) \quad (II);$$

wherein R^1 , R^2 , and R^3 are independently alkyl groups comprising from 1 to 5 carbon atoms;

wherein the reagent forms an assay mixture when mixed with a sample, such that the tertiary amine compound is present in the assay mixture in a concentration of 50 mM or less.

5 14. The reagent of claim 13, wherein the tertiary amine compound is triethanolamine.

 15. The reagent of claim 13, wherein the particles further comprise the reaction product of a succinimide ester and a primary amine compound on the surface;

10 wherein the primary amine is selected from the group consisting of glycine ethyl ester; 2-(aminoethoxy)ethanol; 2,2'-(ethylenedioxy)bisethylamine; and 4,7,10-trioxa-1,3-tridecanediamine.

 16. The reagent of claim 13, wherein the plurality of particles and the tertiary amine compound are present in a single liquid mixture.

15 17. An assay method for determining an analyte, comprising:
 combining a sample suspected of containing said analyte with the reagent of claim 1,

 the reagent comprising the antibody of said analyte, and the reagent capable of forming a detectable complex with said analyte; and

20 determining the presence or amount of said detectable complex as a measure of said analyte in said sample.

 18. An assay method for determining an analyte, comprising:
 combining a sample suspected of containing said analyte with the reagent of claim 4,

25 the reagent comprising the antibody of said analyte, and the reagent capable of forming a detectable complex with said analyte; and

 determining the presence or amount of said detectable complex as a measure of said analyte in said sample.

19. An assay method for determining an analyte, comprising:
combining a sample suspected of containing said analyte with
the reagent of claim 6,
the reagent comprising the antibody of said analyte, and
the reagent capable of forming a detectable complex with said analyte;
and
determining the presence or amount of said detectable complex
as a measure of said analyte in said sample.

20. An assay method for determining an analyte, comprising:
combining a sample suspected of containing said analyte with
the reagent of claim 13,
the reagent comprising the antibody of said analyte, and
the reagent capable of forming a detectable complex with said analyte;
and
determining the presence or amount of said detectable complex
as a measure of said analyte in said sample.

21. A test kit, comprising the reagent of claim 1.

22. A test kit, comprising the reagent of claim 4.

23. A test kit, comprising the reagent of claim 6.

24. A test kit, comprising the reagent of claim 13.

25. In an immunoassay method wherein a sample suspected of
containing an analyte is combined with a plurality of particles, each of said
particles having a surface having been activated by a carbodiimide, and a
binding agent bound to the surface through a covalent bond; the improvement
comprising:

adding to the sample, to form an assay mixture, a tertiary amine
compound of formula (I)



wherein R^1 , R^2 , and R^3 are independently selected from the group consisting of alkyl and alkyl ether; and

X, Y, and Z are independently selected from the group consisting of $-OH$, $-O-R^4$, $-S-R^4$, $-C(=O)-OH$, $-C(=O)-OR^4$, or $-C(=O)-NHR^4$, wherein R^4 is alkyl.

26. The method of claim 25, wherein

R^1 , R^2 , R^3 and R^4 are independently alkyl groups comprising from 1 to 5 carbon atoms; and

X, Y, and Z are $-OH$.

27. The method of claim 25, wherein the tertiary amine compound is present in the assay mixture in a concentration of 50 mM or less.

28. The method of claim 25, wherein the adding to the sample comprises:

combining the tertiary amine with the particles to form a particle mixture; and

combining the particle mixture with the sample.